Public Awareness Programs for Pipeline Operators

API RECOMMENDED PRACTICE 1162
SECOND EDITION, DECEMBER 2010

AMERICAN PETROLEUM INSTITUTE

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Pipeline Segment

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Foreword

This is the second edition of API Recommended Practice (RP) 1162. Through clarifications, enhancements, and streamlining, it attempts to make the original guidance more useful to operators in developing, managing, and improving public awareness programs.

Representatives from natural and other gas and hazardous liquids transmission companies [1], local distribution companies, gathering systems, trade associations, and federal and state pipeline regulators have contributed to the new edition. Additionally, other stakeholders, such as emergency responders, have provided input. This second edition of API 1162 reinforces the goals and objectives of the original document and is largely similar in organization and principal components. However, some changes have been made based on the experiences and insights of stakeholders, including operators from all pipeline segments, who for several years have been implementing public awareness programs under federal regulations incorporating API 1162. The changes aim to make API 1162 easier to understand and use and to increase the effectiveness of operator public awareness programs. A key alteration to the document was aligning baseline messages (those operators must communicate) with core safety messages. The decision to focus on safety messages was based on the recognition, well supported by research and experience, that reducing the number of messages will improve overall message retention. The RP continues to provide operators with other messages for use as circumstances and practicality dictate. To enhance program efficiency and facilitate collaborative efforts, the RP also increases alignment among the pipeline sectors except in cases where variation was felt to be necessary to achieve program effectiveness.

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Suggested revisions are invited and should be submitted to the Standards Department, API, 1220 L Street, NW, Washington, DC 20005, standards@api.org.

[1] As used in this RP, *gas* means natural and other gas and *liquid* means hazardous liquids.

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1 Introduction and Scope

1.1 Introduction

Pipeline operators' public awareness programs provide safety information to stakeholders to help keep communities near pipelines safe. This recommended practice (RP) provides guidance for pipeline operators to develop and manage public awareness programs tailored to meet the needs of the community. It is meant to raise the quality of public awareness programs and align baseline core safety messages across the industry.

Two important objectives of this RP are to provide the following:

— a framework to help each pipeline operator create and manage a public awareness program;

— a process for periodic program evaluation to encourage each operator to enhance the program, at the operator's discretion, as circumstances warrant.

1.2 Scope

The scope of this RP covers the development, implementation, evaluation, and documentation of public awareness programs associated with the normal operation of existing pipeline systems and facilities, including the following:

— transmission pipelines,

— local distribution systems,

— gathering lines.

Communications related to new pipeline construction, offshore operations, and during emergencies are not covered by this RP, nor is it intended to provide guidance to operators for communications about operator-specific performance measures that are addressed through other means of communication or regulatory reporting.

Furthermore, this RP recognizes that there are differences in pipeline conditions, release consequences, populations, increased development and excavation activities, and other factors associated with individual pipeline systems. Some areas with pipelines have a low population, low turnover in residents, and little development or excavation activity; whereas other areas have very high population, high turnover, and extensive development and excavation activity.

Finally, this RP provides the operator with the elements of a recommended baseline public awareness program and considerations to determine when and how to enhance the program to provide the appropriate level of public awareness outreach. Enhancements may affect messages, delivery frequency and methods, geographic coverage areas, program evaluation, and other elements.

2 Regulatory Compliance

This RP is intended to provide a framework for public awareness programs designed to help pipeline operators comply with federal regulatory requirements found in 49 *Code of Federal Regulations* (*CFR*) Parts 192 and 195. Should this RP be incorporated into regulation, operators must follow its general provisions unless justification is provided in their programs or procedural manuals as to why compliance with all or certain provisions is not practicable and/or not necessary for safety.

The principal compliance elements include the following.

2.1 Public Education (49 *CFR* Parts 192.616 and 195.440)

These regulations require pipeline operators to establish continuing education programs to enable the public, appropriate government organizations, and persons engaged in excavation-related activities to recognize a pipeline emergency and to report it to the operator and/or the fire, police, or other appropriate public officials. The program must be conducted in both English and in other languages commonly understood by a significant number and concentration of the non-English speaking population in the operator's area.

2.2 Emergency Responder Liaison Activities (49 *CFR* Parts 192.615 and 195.402)

These regulations require that operators establish and maintain liaison with fire, police, and other appropriate public officials and coordinate with them on emergency exercises or drills and actual responses during an emergency.

2.3 Damage Prevention (49 *CFR* Parts 192.614 and 195.442)

These regulations require pipeline operators to carry out written programs to prevent damage to pipelines by excavation activities.

2.4 Other Regulations

Operators should determine if state, local, or other regulations exist with which they must comply.

3 Terms, Definitions, Acronyms, and Abbreviations

3.1 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
8-1-1 (call 811 or 811)
National Call Before You Dig telephone number federally mandated to eliminate the need of having to remember a state "One Call Center" toll-free telephone number.

3.1.2
baseline public awareness program
Relevant components of an operator's public awareness program for delivery frequency, message content, and delivery methods as summarized in Annex A of this document.

3.1.3
Dig Safely
Nationally recognized damage prevention education and public awareness program to enhance safety, environmental protection, and service reliability by reducing underground facility damage.

3.1.4
encroachment
Unauthorized advancement onto or within the operator's ROW.

3.1.5
enhanced public awareness program
Components of a public awareness program that exceed baseline program provisions.

NOTE Enhancements are also known as supplemental requirements under Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations (49 *CFR* Part 192.616 and 49 *CFR* Part 195.440).

3.1.6
focus group
Participants representing one or more target audiences who are gathered to provide feedback on a topic.

3.1.7
gathering line
Pipelines that transport liquid petroleum and gas products from production areas to central collection points.

NOTE Depending on jurisdiction, this may include processing facilities.

3.1.8
high consequence area
HCA
Location defined in pipeline safety regulations as an area where pipeline releases could have greater consequences to health and safety or the environment.

3.1.9
highly volatile liquid
HVL
Hazardous liquid that will form a vapor cloud when released to the atmosphere and has a vapor pressure exceeding 40 psia (276 kPa) at 100 °F (37.8 °C).

3.1.10
integrity management program
IMP
A systematic and comprehensive process designed to provide information to effectively allocate resources for the appropriate prevention, detection, and mitigation activities as referenced in the rules under 49 *CFR* Part 192 or 49 *CFR* Part 195.

3.1.12
local distribution system
Pipeline systems that receive gas at local distribution system stations and distribute it to the local end user, consisting of mains which are usually located along or under city streets and smaller service lines that connect to the mains to further distribute natural gas service to homes and businesses.

3.1.13
may
Denotes the option to conform to a requirement.

3.1.14
One Call Center
Centralized notification system that establishes a communication link between those who dig underground and those who operate underground facilities.

NOTE The role of the One Call Center is to receive notifications of proposed excavations, identify possible conflicts with nearby facilities, process the information, and notify affected facility owners/operators.

3.1.15
operator
For transportation of hazardous liquid by pipeline, a person who owns or operates pipeline facilities; for transportation of natural and other gas by pipeline, a person who engages in the transportation of gas.

3.1.16
pipeline(s)
All assets associated with pipeline facilities as defined in 49 *CFR* Parts 192 and 195.

3.1.17
potential impact radius
PIR
The radius of a circle as defined in 49 *CFR* Part 192.

3.1.18
resident
Property owner or tenants occupying residences.

3.1.19
right-of-way
ROW
Defined land on which an operator has the rights to construct, operate, and/or maintain a pipeline.

NOTE A ROW may be owned outright by the operator or an easement may be acquired for its specific use.

3.1.20
should
Denotes a recommendation or that which is advised but not required in order to conform to the requirements of the document.

3.1.21
sour gas
Natural gas or any other gas containing amounts of hydrogen sulfide (H_2S) as defined by regulatory agencies.

3.1.22
third-party damage
Outside force damage to pipelines and other underground facilities that may occur due to excavation activities not performed by the operator or at the request of the operator.

3.1.23
transmission pipeline
Pipeline systems that transport hazardous liquids or gas products within a state or between states.

NOTE Natural gas transmission pipelines deliver product to direct-served customers and local distribution system stations where pressure is lowered for final distribution to end users. Hazardous transmission pipelines transport product to bulk terminals, refineries, chemical plants, and other related facilities.

3.2 Acronyms and Abbreviations

For the purposes of this document, the following acronyms and abbreviations apply.

AGA	American Gas Association
AOPL	Association of Oil Pipe Lines
APGA	American Public Gas Association
API	American Petroleum Institute
CFR	Code of Federal Regulations
CGA	Common Ground Alliance
DIRT	Damage Information Reporting Tool
FCC	Federal Communications Commission
H_2S	hydrogen sulfide
HCA	high consequence area
HVL	highly volatile liquid
IMP	integrity management program
INGAA	Interstate Natural Gas Association of America
LDC	local distribution company

LEPC	Local Emergency Planning Committee
NAICS	North American Industry Classification System
NPMS	National Pipeline Mapping System
PHMSA	Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation
PIR	potential impact radius
PSA	public service announcement
ROW	right-of-way
RP	recommended practice
SIC	Standard Industrial Classification

4 Overview

The overall goal of an operator's public awareness program is to help protect people, property, and the environment through increased stakeholder awareness and knowledge. A public awareness program should inform stakeholders about the presence of pipelines in their communities, the steps that they should take to prevent damage to pipelines, and how stakeholders should recognize, report, and respond to pipeline emergencies.

This chapter provides an overview of the process for developing, implementing, and evaluating a public awareness program. Although this RP aims to achieve greater consistency among public awareness programs, programs will vary because of differences in pipeline systems, stakeholder audiences, and potential hazards.

Figure 1 describes the process for a public awareness program.

5 Program Establishment

Establishing a public awareness program includes the following five activities:

— define objectives (what the public awareness program should accomplish),

— obtain management commitment (management to recognize and support the public awareness program),

— establish program administration (administrative framework for the program and assigning personnel),

— identify pipeline assets (which assets should be covered by the public awareness program),

— identify stakeholder audiences (which people should be targeted to receive public awareness messages).

5.1 Define Objectives

The following three objectives (together with others that may be identified by individual pipeline operators) provide the foundation for a pipeline public awareness program.

5.1.1 Awareness of Pipeline

Public awareness programs should raise stakeholder audience awareness of the presence of pipelines in their communities and of the significant role they can play in helping to prevent pipeline emergencies and releases, including accidents caused by third-party damage and right-of-way (ROW) encroachment. Public awareness programs also help stakeholder audiences understand that pipeline accidents are rare and that pipelines are a safe mode of transportation.

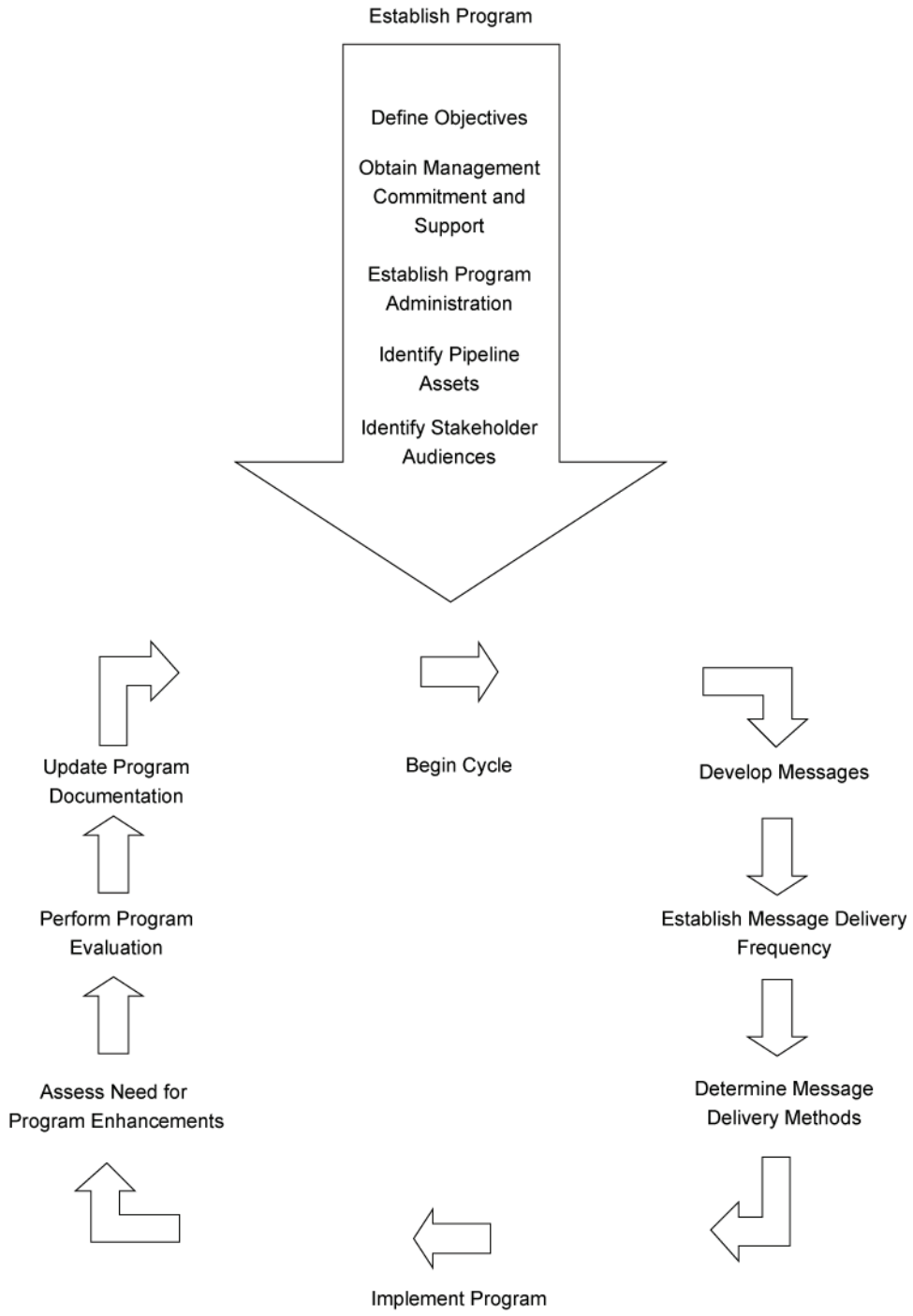

Figure 1—Public Awareness Program Process

5.1.2 Prevention

Public awareness programs should help stakeholder audiences understand how to prevent pipeline emergencies. Prevention helps reduce the occurrence of pipeline emergencies caused by third-party damage through awareness of safe excavation practices and the use of the One Call Center.

5.1.3 Response

Public awareness programs should help stakeholder audiences understand how to respond to a pipeline emergency. Pipeline operators undertake a variety of measures to prevent pipeline accidents and anticipate and plan for management of accidents if they occur.

5.2 Obtain Management Commitment

For a public awareness program to achieve stated objectives, ongoing support within the operator's organization is crucial. Management should demonstrate support through company policy, management participation, a written statement of support, and allocation of resources and funding.

5.3 Establish Program Administration

The written public awareness program should include a detailed description of how the program will be administered company-wide, including the following:

— description of the roles and responsibilities of personnel administering the program;

— identification of key personnel and their titles (including management responsible for program support through company policy, management participation, and allocation of resources and funding of the program).

5.4 Identify Pipeline Assets

Operators should identify all assets covered by the public awareness program (e.g. pipeline, tanks, facilities, etc.). The overall program may be a single public awareness program for all pipeline assets or may be divided into individual, asset-specific programs for one or more specific pipeline systems, one or more pipeline segments, one or more facilities, or one or more geographic areas. An administrator should be named for each program.

5.5 Identify Stakeholder Audiences

One of the initial tasks in developing a public awareness program is to identify the stakeholder audiences that should receive the program messages. Stakeholder audiences are comprised of four categories, including the affected public, emergency officials, public officials, and excavators. Operators may hire outside consultants to assist them in identifying stakeholder audiences. Operators should keep a record of how the stakeholder audience lists were compiled and what system was employed, such as the Standard Industrial Classification (SIC) and/or the North American Industry Classification System (NAICS). Operators should develop an in-house process to validate the accuracy of mailing information obtained internally, from the postal service or from outside consultants. Table 1 through Table 4 identify the general stakeholders impacted by this document.

5.5.1 Affected Public

For the purposes of this document, the affected public is residents and/or businesses located near or adjacent to transmission, distribution, and gathering pipelines. For a more detailed example of these audiences, please see Table 1.

An operator should determine specific affected public addresses near the pipeline within a specified minimum coverage area. Examples of how an operator may identify affected public addresses are through a nine-digit zip code address database or geo-spatial address databases. These databases generally provide only the addresses and not the names of the persons residing there. For apartments, individual apartment unit addresses should be used, not just the address of the apartment building or complex.

Some operators may maintain "line lists," which provide current information on names and addresses of people who own property on which the pipeline is located. However, people not owning the property may live on the property and should also be contacted.

Where the local distribution system operator has a customer base, it may be used for identifying affected public addresses.

For stakeholder audiences identified in Table 1, including “Residents located adjacent to the transmission pipeline ROW” and “Places of congregation,” transmission pipeline operators should stipulate the minimum coverage in their program. An operator may choose to define the minimum coverage area in a variety of ways. For example, the operator may determine the minimum coverage area by using a distance of 660 ft from the centerline of the ROW; or 660 ft from the centerline of the pipeline; or determine the area using a potential impact radius (PIR) calculation.

Table 1—Stakeholder Audiences—Affected Public

Stakeholder Audience	Audience Definition	Examples
Residents located adjacent to the transmission pipeline ROW	People who live or work adjacent to a natural gas and/or hazardous liquid transmission pipeline ROW	— Residents — Farmers — Homeowners associations or groups — Neighborhood organizations
Residents located along local distribution systems	People who live or work on or immediately adjacent to the land where gas distribution pipelines are buried	— Local distribution company (LDC) customers — Non-customers living immediately adjacent to the land where distribution pipelines are located — Homeowners associations or groups — Neighborhood organizations
Residents near liquid or natural gas storage and other major operational facilities along transmission lines	People who live or work adjacent to or near a major facility such as tank farm, storage field, and pump/compressor station	— Residents — Farmers — Homeowner associations or groups — Neighborhood organizations
Residents located along gathering lines	People who live or work along gathering lines	— Residents — Farmers — Homeowner associations or groups — Neighborhood organizations
Places of congregation	Identified places where people assemble or work on a regular basis—on or along a transmission pipeline ROW, gathering lines, and local distribution systems	— Businesses — Schools — Places of worship — Hospitals and other medical facilities — Parks and recreational areas — Daycare facilities — Playgrounds

5.5.2 Emergency Officials

The pipeline operator should identify appropriate emergency officials whose jurisdictions are traversed by the pipeline. Examples of emergency officials are given in Table 2.

Table 2—Stakeholder Audiences—Emergency Officials

Stakeholder Audience	Audience Definition	Examples
Emergency officials	Local, city, county, state, or regional officials, agencies and organizations with emergency response and/or public safety jurisdiction in the area of the pipeline	— Fire departments — Police/sheriff departments — Local Emergency Planning Committees (LEPCs) — County and state emergency management agencies — 911 centers and/or emergency dispatch

5.5.3 Public Officials

The pipeline operator should identify appropriate public officials whose jurisdictions are traversed by the pipeline. Examples of public officials are given in Table 3.

Table 3—Stakeholder Audiences—Public Officials

Stakeholder Audience	Audience Definition	Examples
Public officials	Local, city, county, state, regional, federal officials, agencies and/or their staff having land use and street/road jurisdiction in the area of the pipeline	— Planning boards — Zoning boards — Licensing departments — Permitting departments — Building code enforcement departments — City and county managers — Public and government officials — Public utility boards — Local governing councils — Public officials who manage franchise or license agreements — Military installations

5.5.4 Excavators

The pipeline operator should identify persons or companies who normally engage in excavation activities in areas in which the pipeline is located. Examples of individuals or companies that would be considered excavators are given in Table 4.

Table 4—Stakeholder Audiences—Excavators

Stakeholder Audience	Audience Definition	Examples
Excavators	Companies and local/state government agencies who are normally engaged in excavation activities and/or land development and planning	— Construction companies — Excavation equipment rental companies — Public works officials — Public street, road, and highway departments (maintenance and construction) — Timber companies — Fence building companies — Drain tiling companies — Landscapers — Well drillers — Land developers — Home builders

6 Messages

The information communicated to the stakeholder audiences plays a vital role in damage prevention. Messages are information that operators provide to stakeholder audiences to improve awareness of pipelines. Messages should be focused, concise, and clear. Such messages are intended to keep communities safe and prevent damage to pipelines. According to federal regulations, the program should be conducted in English and in other languages commonly understood by a significant number and concentration of the non-English speaking population in the operator's area.

Communications experts agree that people cannot absorb large amounts of information at one time. The message content has been divided (by stakeholder audience) into two main categories: baseline and enhanced messages. Baseline messages are core safety messages and vary depending on stakeholder audience and type of pipeline. Operators should provide baseline messages to each stakeholder audience. An operator has the flexibility to determine when and if enhanced messages are necessary (see Section 8).

Table 5 sets forth baseline message topics that should be used for each stakeholder audience and type of pipeline. It should be noted that a particular baseline message may apply to one category of pipelines or stakeholder audience (e.g. only operators of transmission pipelines are required to send the National Pipeline Mapping System (NPMS) baseline message to emergency officials and public officials. Operators of other categories of pipelines are not required to send this specific baseline message). At the pipeline operator's discretion, some or all of these messages may also be reiterated in an enhanced program. The summary tables in Annex A list baseline and enhanced message topics for each stakeholder audience and type of pipeline along with delivery methods and frequencies.

This RP provides a general description of the messages. Operators should develop the wording for each message based on this guidance and what is appropriate for their pipeline assets. Company contact information should be provided to all stakeholders in the baseline public awareness program.

Table 5—Baseline Messages

Message	Affected Public	Emergency Officials	Public Officials	Excavators
Damage prevention	T, D, G		T, D, G	T, D, G
Emergency preparedness		T, D, G		
Leak/damage recognition and response	T, D, G	T, D, G	T, D, G	T, D, G
NPMS		T	T	
One Call requirements	T, D, G		T, D, G	T, D, G
Pipeline location information	T, D, G	T, D, G	T, D, G	T, D, G
Potential hazards	T, D, G	T, D, G	T, D, G	T, D, G
ROW encroachment	T		T	

NOTE Letters denote type of pipeline: T = Transmission, D = Distribution, G = Gathering.

6.1 Damage Prevention

Operators should convey to audiences the importance of damage prevention, noting that even relatively minor excavation activities (e.g. installing mail boxes, privacy fences and flag poles, performing landscaping, constructing storage buildings, etc.) may cause damage to a pipeline or its protective coating or to other buried utilities. Operators should keep the damage prevention message content consistent with the following “Dig Safely” messages:

— call 811 or the One Call Center before digging,

— wait for the site to be marked,

— respect the marks,

— dig with care.

Operators may also consider use of the 811 logo or the “No Dig” symbol in their materials (see B.3 for more information on “Dig Safely” and related materials).

It is important to convey to audiences the unique role they play in protecting themselves, their community and the environment by reporting activities that could be a threat to pipeline integrity. Messages should be structured to raise stakeholder awareness of the need to look for and report any suspicious activities or suspected pipeline damage.

6.1.1 Suspicious Activity

Encourage stakeholders to report any suspicious activities on or near the pipeline system by individuals who are not performing obvious pipeline operation activities. Reporting suspicious activities is a proactive way to prevent damage to the pipeline system.

6.1.2 Suspected Damage

Encourage stakeholders to report any damage to the pipeline system or any observed conditions that could threaten the integrity of the pipeline system. Some examples are exposed pipe, subsidence, sink holes, dead vegetation, or unstable soil.

NOTE This message addresses the important role a stakeholder audience plays in preventing third-party damage and ROW encroachments.

6.2 Emergency Preparedness

These messages demonstrate that the operator has an ongoing relationship with emergency response officials, including 911 emergency call and dispatch centers and a program designed to prepare for and respond to an emergency.

6.2.1 Priority to Protect Life

Operator emergency response plans and key messages relayed to emergency officials should emphasize that public safety and environmental and property protection are the top priorities in any pipeline emergency response.

6.2.2 Emergency Contacts

Operator contact information should be communicated to local and state emergency officials. If practicable, operators should also use the public awareness contact opportunity to confirm the contact information for the local and state emergency officials and calling priorities within each organization.

6.2.3 Liaison with Emergency Officials

Information communicated to emergency responders may be more detailed, provide an opportunity for two-way feedback, and include additional details on the products transported, facilities located within the jurisdiction and the local emergency planning liaison.

NOTE Operators are reminded to carefully review the details of applicable regulations in 49 *CFR* Parts 192 and 195.

6.2.4 Emergency Response Plans

Operators may communicate emergency response plans to local emergency responders in order to increase awareness of pipelines and response to emergencies.

NOTE Operators are reminded to carefully review the details of applicable regulations in 49 *CFR* Parts 192 and 195.

6.2.5 Emergency Drills and Exercises

Drills and exercises offer many additional opportunities for communicating messages and information. When participating with emergency response officials in drills and deployment exercises, operators may communicate material to them on unified incident command system roles, operating procedures, and preparedness for various emergency scenarios.

6.3 Integrity Management Programs (IMPs)

Materials may provide an overview of an operator's IMP and identify how more information on IMP may be obtained. An overview of an operator's IMP should include a general description of the basic requirements and components of the program. This does not need to include a summary of the specific locations or schedule of activities undertaken. The overview may be mailed upon request or made available on the operator's website.

NOTE Operators are reminded to carefully review the details of applicable regulations in 49 *CFR* Parts 192 and 195.

6.4 How to Get Additional Information

Operators may consider informing stakeholder audiences about how to get additional pipeline-related information from various sources, including operator, trade association and government (see Annex B). Operator-specific information may include encroachment/landscape/property guidelines, crossing requirements, and local contacts.

6.5 Leak/Damage Recognition and Response

Messages about recognizing and responding to leaks and damage to pipelines are important. As appropriate to the product type, messages about recognizing a suspected pipeline leak, release, or observed damage should relate to the senses of:

— sight,

— sound,

— smell.

Messages about responding to a suspected pipeline leak or release should include the following:

— what to do if a leak is suspected;

— what not to do if a leak is suspected;

— how to contact the operator and fire, police, or other appropriate public officials in an emergency.

It is important to include specific information on detection and response if the pipeline contains product that, when released, could be immediately hazardous to health (e.g. high concentration of H_2S). Information provided to excavators includes the need to communicate when damage to a pipeline from excavation activities occurs. Excavators should be directed to call 911 and the pipeline operator when a leak or damage occurs. For other situations, stakeholder audiences should be directed to call the pipeline operator.

6.6 NPMS

Members of the general public may obtain pipeline location and/or mapping information by accessing the NPMS on the Internet (see B.2). The NPMS includes a list of pipeline operators and contact information for operators with pipelines in a specific area along with mapping information. Inquiries may be made by zip code or by county and state. Pipeline location maps are made available electronically to state and local emergency officials, in accordance with federal security measures. Distribution and gathering lines are not included in NPMS.

6.7 One Call Requirements

The Federal Communications Commission (FCC) has designated 811 as the national One Call, toll-free number. In addition, One Call Center telephone numbers for all 50 states can be found on the 811 and Dig Safely websites (see B.3).

The stakeholder audience should be reminded to call 811 or the state One Call Center before beginning any excavation activity and advised that in most states it is required by law. If the state or locality has established penalties for failure to use established damage prevention procedures, that information may also be communicated, depending on the audience and situation. Excavation and One Call information should include the following:

— when to contact 811 or the One Call Center before digging,

— what happens when 811 or the One Call Center is notified,

— the 811 or toll-free One Call Center telephone numbers,

  - 811 or One Call service is typically free,

  NOTE There are some exceptions by state.

  - calling 811 or One Call Center may be required by law.

6.8 Pipeline Location Information

Following are various methods that can be used to provide pipeline location information.

6.8.1 Pipeline Markers

Pipeline markers are a valuable tool for educating the public regarding the general location of pipelines. The information should include how to identify transmission pipeline ROWs by recognition of pipeline markers, especially at road crossings, fence lines and street intersections. For specific required information on pipeline markers and their content, see 49 *CFR* Parts 192.707 and 195.410.

NOTE Additional guidance for liquid pipeline marker design, installation, and maintenance is provided in API 1109.

6.8.2 Gathering and Distribution Pipeline Location

Gathering lines and distribution lines do not always have designated rights of way or use pipeline markers, but stakeholder audiences should be made aware that these types of underground pipeline facilities may be nearby.

6.8.3 Pipeline Mapping

Pipeline maps provide useful information to stakeholder audiences. The level of detail in the map depends on the stakeholder's requirements, taking security of the energy infrastructure into consideration.

The following summarizes the types of maps that may be provided to stakeholder audiences.

— *System Maps*—System maps provide general depiction of a pipeline shown on a state, regional, or national scale. This type of map generally is not at a scale that poses security concerns and is often used by operators in a number of publications available to the industry and general public. These maps provide a high-level overview of the pipeline route and location of facilities.

— *Local Maps*—Local maps are generally shown on a neighborhood, town, city, or county level and usually do not show the entire pipeline system. Local maps are especially appropriate in communication with local emergency officials, One Call Centers, and public officials when discussing land use planning.

— *NPMS*—Information including maps of communities that depict all of the natural gas and liquid transmission pipeline systems in the area is available from PHMSA.

6.9 Pipeline Purpose and Reliability

Operators may consider providing general information about pipeline transportation, such as the following:

— the role, purpose, and function of pipelines and/or associated facilities in U.S. energy supply;

— pipelines as part of the energy infrastructure;

— efficiency and reliability of pipelines;

— the industry's safety record;

— the individual operator's pipeline safety actions and environmental record;

— the benefits of the pipeline to the community;

— state and federal regulations with regard to pipeline design, construction, operation, and maintenance;

— operational activities that promote pipeline integrity, safety, and reliability (testing practices, inspections, patrolling, etc.).

Communication with the affected public, emergency, and public officials in proximity to major facilities (such as storage facilities, compressor or pump stations) may include information on the purpose of the facility and the categories of products stored or transported through it.

6.10 Potential Hazards

Operators should provide a broad overview of potential hazards.

General information about pipeline hazards may be communicated, while also assuring the stakeholder audience that accidents are relatively rare. Information about the general product release characteristics and potential hazards that could result from an accidental release of hazardous liquids or gases from the pipeline or distribution system should be included in the message. The operator may reference how stakeholders may obtain more information regarding products transported.

6.11 Prevention Measures

Operators may provide a broad overview of the measures operators undertake to prevent or mitigate pipeline incidents. This message should also reinforce how the stakeholder audience can play an important role in preventing third-party damage and ROW encroachments.

The message includes a general overview of the preventive measures undertaken by the operator in the planning, design, operation, maintenance, inspection, and testing of the pipeline. The causes of pipeline failures, such as third-party excavation damage, corrosion, material defects, and events of nature, should also be communicated.

6.12 ROW Encroachment

Some ROW encroachments increase the chance of third-party damage and inhibit the operator's ability to perform critical activities. Operators should communicate that, in order to conduct surveillance, routine maintenance and inspections, the operator must be able to access the ROW, as provided in the easement agreement. The operator should also indicate that to ensure access for maintenance and during emergencies the area must be clear of trees, shrubs, buildings, fences, structures, or any other encroachments. Operators point out that the landowner has the obligation to respect the pipeline easement by not placing obstructions or encroachments there, and that maintaining an encroachment-free ROW is essential for pipeline integrity and safety.

Operators should consider communicating with local authorities regarding effective zoning and land use requirements/restrictions that protect existing pipeline ROWs from encroachment. Communications with local land use officials may include consideration of the following:

— how community land use decisions (e.g. planning, zoning, etc.) impact community safety;

— requiring prior authorization from easement holders in the permit process so that construction/development does not impact the safe operation of pipelines;

— requiring pipeline operator involvement in road widening or grading, mining, blasting, dredging, and other activities that impacts the safe operation of the pipeline.

Residents, excavators, and land developers should be directed to contact the pipeline operator if there are questions concerning the pipeline or the ROW. Major projects may further require early coordination with the pipeline operator. These audiences should also be informed that they may be required by state law to provide at least 48 hours advance notice, more in some states, to the appropriate One Call Center prior to performing excavation activities.

6.13 Special Emergency Procedures

Procedures should be communicated to specific stakeholder audiences if the pipeline contains product that, when released, could be immediately hazardous to health (e.g. high concentrations of H_2S, benzene, anhydrous ammonia, etc.). Where appropriate, this should include product information, steps to take in an emergency, how to contact the facility operator, and where to find other relevant information. State regulations may have different

communication requirements. Operators may want to provide notification and/or evacuation information to residents.

6.14 Special Incident Response Notification and Evacuation Measures

Operators may want to provide notification and/or evacuation information to residents near liquid or natural gas storage or other major operational facilities along transmission lines. Where appropriate, this should include product information, steps to take in an emergency, how to contact the facility operator, and where to find other relevant information.

7 Delivery Frequencies and Methods

Delivery frequencies and methods refer to how often and in what ways public awareness information is presented to stakeholder audiences. While this RP does not mandate a specific baseline delivery method, it does identify baseline delivery frequencies. The summary tables in Annex A set forth delivery methods and baseline delivery frequencies.

7.1 Delivery Frequencies

The frequency of message delivery varies according to type of operator and stakeholder audience in addition to other external factors/circumstances. An increased delivery frequency constitutes an enhancement to the program. Baseline delivery frequencies depend on the stakeholder audience and pipeline category. An operator has the flexibility to determine if changes to delivery frequencies are necessary. For information on frequencies, see summary tables in Annex A.

7.2 Delivery Methods

An operator should select the baseline method(s) that would be effective in reaching the identified stakeholder audience. Methods may vary based on many factors, including stakeholder audience and type of pipeline among others. An operator may choose to enhance the public awareness program by employing additional delivery methods.

An operator should not exclusively rely on any one of the following methods to meet baseline public awareness program provisions. Although valuable, some methods on their own are not the most effective manner to communicate baseline messages and may not adequately reach stakeholders. They include the following:

— operator websites,

— media news coverage,

— community and neighborhood newsletters,

— drills and exercises,

— open houses,

— community events,

— charitable contributions,

— operator employee participation,

— pipeline markers.

Consideration may be given to joining with other pipeline companies in a local, regional, or national setting to produce and deliver common message materials. This approach may increase effectiveness, avoid conflicting

messages, or reduce the cost to individual operators. Caution should be used when joining a program to insure the messages, frequencies, and delivery methods reflect an operator's public awareness program.

Also, in providing materials to stakeholder audiences, it may be advisable to emphasize to recipients (e.g. the owner of an excavation firm or elected official or public agency department head) the importance of disseminating the materials to all appropriate individuals (e.g. supervisors, inspectors, line personnel, and field personnel) within the organization to further enhance safety and reduce potential costs and liability.

The following describes some delivery methods.

7.2.1 Electronic Communications Methods

7.2.1.1 Videos

Videos may be useful in showing activities such as pipeline maintenance, pipeline routes, simulated or actual spills and emergency response exercises, or actual emergency responses. Such videos may be used for landowner contacts, emergency official meetings, or community meetings. Companies may seek videos from trade organizations or develop their own.

7.2.1.2 E-mail

Electronic mail ("e-mail") may be used to send public awareness information to stakeholders. E-mail contact information may be provided on company handouts and other written communications to encourage two-way communication between the stakeholder and the operator.

7.2.1.3 Operator Websites

7.2.1.3.1 General

Operators may use company websites to share public awareness information with stakeholders. In addition, websites may be used to post educational videos, electronic versions of public awareness brochures, and links to other industry resources/organizations. Operator websites provide information on a variety of subjects, including the following.

7.2.1.3.2 General Company Background

In addition to describing the purpose of the pipeline, the website usually includes a general description of the pipeline operator and system. This may include the following:

— operator and owner name(s);

— region and energy market served

— general office and emergency contacts telephone numbers and e-mail addresses;

— products transported;

— system or general map and location of key offices (headquarters, region, or districts).

7.2.1.3.3 Company Pipeline Operations

A broad overview of the operator's pipeline safety and integrity management approach includes describing the various steps the company takes to ensure the safe operation of its pipelines. While not specifically recommended, additional information to consider for the website includes the following:

— general pipeline system facts;

— an overview of routine operating, maintenance, and inspection practices of the system;

— an overview of major specific inspection programs and pipeline control and monitoring programs.

7.2.1.3.4 Transmission Pipeline Maps

A system map is useful for posting on the website. Details on how to obtain additional information may be provided, including reference to the NPMS.

7.2.1.3.5 Public Awareness Programs

The operator may include a summary of the public awareness program and printed material. Contacts should be provided for requesting additional information.

7.2.1.3.6 Emergency Information

The website may contain emergency awareness information, including a summary of the operator's emergency preparedness and information on how the affected public and/or public officials may help protect, recognize, report and respond to a suspected pipeline emergency. Emergency contact information may be prominently listed on the website.

7.2.1.3.7 Damage Prevention

Operators are encouraged to either provide or link the viewer to additional guidance on preventing excavation damage, such as 811 and the "Dig Safely" program information, contact information for 811, and the One Call Center in each of the states in which the operator has pipelines.

7.2.2 Mass Media Communications

7.2.2.1 Public Service Announcements (PSAs)

PSAs are non-commercial advertisements, which are communicated through various media, including television, radio, newspapers, magazines, or billboards to inform the public about an issue. Occasionally, radio and television stations allocate free airtime for PSAs. Cable TV public access channels may also be an option.

7.2.2.2 Media News Coverage

Pipeline operators may encourage the media to cover pipeline issues, such as local projects, excavation safety, or the presence of pipelines as part of the energy infrastructure. If the media are reporting on an emergency or controversial issue, pipeline operators may leverage the opportunity to reinforce key safety information messages such as damage prevention and the need to be aware of pipelines in the community. Trade magazines such as those for excavators or farmers often welcome guest articles. Local weekly newspapers and "metro" section inserts often include a news release verbatim at no cost.

7.2.2.3 Paid Advertising

The use of paid advertising media such as television ads, radio spots, newspapers ads, and billboards may be made more cost-effective by joining with other pipelines, including local utilities. Some examples are placement of a public awareness advertisement on a phone book cover or in local shopping guides.

7.2.2.4 Community and Neighborhood Newsletters

Posting of pipeline safety or other information to community and neighborhood newsletters may be done in conjunction with outreach to those communities and/or neighborhoods and may sometimes be free of charge. Operators may also develop their own newsletters tailored to specific communities.

7.2.3 Personal Contact

Personal contact between the operator and the intended stakeholder audience is usually a highly effective form of communication, and it may help build stakeholder trust. This may be done on an individual basis or in a group setting. Some examples of communications through personal contact are as follows.

7.2.3.1 Door-to-door Contact

On-site visits to specific stakeholders located near the pipeline, which are conducted by the operator or its representative.

7.2.3.2 Telephone Calls

Telephone calls to specific stakeholders located near the pipeline, which are conducted by the operator or its representative.

7.2.3.3 Group Meetings

An operator may elect to conduct stakeholder meetings individually or in conjunction with other operators. Some examples of stakeholder group meetings may include: emergency officials, public officials, state One Call Centers, excavators, land developers, schools, community/neighborhood organizations, etc.

7.2.3.4 Drills and Exercises

Information on unified (incident) command system roles, operating procedures, and preparedness for various emergency scenarios may be communicated effectively to emergency officials during drills and deployment exercises.

7.2.3.5 Open Houses

Operators may hold open houses to provide an informal setting to introduce an upcoming project, provide a “get-to-know-your-neighbor” atmosphere or to discuss an upcoming maintenance activity such as pipeline segment replacement. Such events may include tours of company facilities, question-and-answer sessions, videos, and other presentations. Targeted or mass mailings may be used to announce planned open houses and can, in themselves, communicate important information.

7.2.3.6 Community Events

Community-sponsored events, fairs, charity events, job fairs, trade shows, or civic events may provide opportunities to communicate with stakeholders. Companies may participate with a booth or as a sponsor of the event.

7.2.3.7 Charitable Contributions

In some cases, contributions to charities and civic causes may provide opportunities to convey public awareness messages. Some examples include the following:

— sponsorship of emergency responders to fire training school,

— contribution of natural gas detection equipment to the local volunteer fire department,

— donation of funds to acquire or improve nature preserves or green space,

— sponsorship to community arts and theatre,

— support of scholarships (especially when degree programs are relevant to the company or industry).

7.2.3.8 Operator Employee Participation

As members of communities and community service organizations, informed employees of a pipeline operator may play an important role in promoting pipeline awareness. An operator may include in the public awareness program provisions for familiarizing employees with public awareness information and materials. Many public awareness programs include components for key employee training in public awareness and communication training for key employees.

Operator employees may be a key part of public awareness efforts. Grassroots employee contacts and communications may be particularly important in reaching out to a community. Interested employees should be given the necessary training, communications materials, and as appropriate, opportunities for direct involvement with the community.

7.2.3.9 One Call Center Outreach

Operators are required by 49 *CFR* Parts 192.614 and 195.442 to become members of One Call Centers. Most state One Call Centers implement public awareness activities about the One Call requirements and the 811 Call Before You Dig message. Pipeline operators may count such communication as part of their public awareness programs.

7.2.4 Targeted Distribution of Print and Other Materials

Print materials are used to communicate general public awareness messages to stakeholder audiences. They afford an opportunity to communicate content in a graphical or pictorial way. Operators should consider the type, language, and design of the print material, based on the audiences to be reached.

Print materials may be mailed to residents or communities along the pipeline system or handed out at local community fairs, open houses, or other public forums. Information may be obtained from the postal service or service provider on size, folding, and closure requirements to minimize the postage costs for mass mailings. Outside consultants may be used to assist with printing, identification of addresses, mailing, and documentation.

Some examples include the following:

— brochures (flyers or leaflets), small booklets or pamphlets containing educational material;

— letters (including door hangers);

— maps;

— response cards (referred to bounce back cards or business reply cards), used to maintain/update current mailing lists, permit the recipients to notify the operator of any changes in address, provide a way for recipients to make comments, request additional information, raise concerns or ask questions, and help evaluate the effectiveness of the operator's public awareness program;

— bill stuffers (printed materials that LDCs frequently send to customers along with invoices);

— specialty advertising materials, including refrigerator magnets, calendars, day planners, thermometers, key chains, flashlights, hats, jackets, shirts, clocks, wallet cards, and other such items containing a short message (e.g. 811 Call Before You Dig, the company logo, and/or contact information);

— training materials designed to increase knowledge and skills in responding to pipeline emergencies;

— electronic materials (including videos, CDs, PowerPoint presentations, PDFs, etc.).

7.2.5 Pipeline Marker Signs

Pipeline marker signs are valuable tools for educating the public regarding the general location of pipelines. For more information, see 49 *CFR* Parts 192.707 and 195.410 and API 1109.

8 Program Implementation and Enhancements

Program implementation refers to actions that an operator takes to plan, conduct, review, evaluate, document, and improve a public awareness program. At any time during program implementation, an operator may enhance a baseline program. An operator should develop a specific process for considering whether enhancements are warranted to achieve awareness objectives.

8.1 Program Implementation

To implement the program, an operator should do the following:

— develop a schedule for conducting the program activities;

— develop resource and obtain monetary support;

— identify, assign, and task participating company employees needed to implement the program;

— identify external resources or consultants needed;

— conduct program activities (e.g. mass mailings, emergency official meetings);

— periodically update the program with newly identified activities;

— collect feedback from internal and external sources;

— document the above.

See Annex E for a sample checklist that may aid an operator in implementing its public awareness program.

8.2 Program Enhancements

To determine if some additional level of public awareness communication is warranted beyond the baseline program, each operator should establish a written process (e.g. risk assessment, self-audit, committee review, third-party evaluation, etc.) for considering relevant factors along the pipeline system. Examples of some of the factors an operator may consider are as follows:

— potential hazards (e.g. increased risk due to characteristics of product transported);

— high consequence areas (HCAs) (e.g. potential impact is greater for a specific area);

— population density (e.g. pipeline traverses densely populated urban area);

— land development activity (e.g. developers perform frequent excavations near pipeline);

— agricultural activity (e.g. pipeline route traverses active farming areas);

— third-party damage incidents (e.g. operator data show damages or near misses have increased);

— environmental considerations (e.g. pipeline route traverses environmentally sensitive area);

— pipeline history in an area (e.g. frequent number of incidents in a particular area);

— specific local situations (e.g. heightened public concern about pipeline safety);

— regulatory actions (e.g. advisory bulletin, findings from inspection);

— results from previous public awareness program evaluations (e.g. survey results indicate low stakeholder awareness).

Program enhancements that should be considered include:

— *Increased Frequency*—Providing communications to specific stakeholder audiences on a more frequent basis (shorter intervals) than the baseline public awareness program provisions.

— *Additional Message Content*—Providing re-phrased, different, or additional messages to specific stakeholder audiences beyond the baseline messages, and/or tailoring messages to address specific audience needs.

— *Alternative Delivery Method(s)*—Using different delivery methods (e.g. neighborhood meetings, door hangers, personal contact, etc.) to reach the target stakeholder audience.

— *Increased Coverage Area*—Broadening or widening the stakeholder audience coverage area (e.g. widening the buffer distance for reaching the stakeholder audience).

If a determination has been made that enhancements are warranted, the pipeline operator should implement an enhanced public awareness program. See Table A.1 through Table A.3.

9 Evaluation

The purpose of the evaluation of the public awareness program is to:

— assess whether the current program is effective in achieving the objectives for operator public awareness programs as defined in 5.1 of this RP,

— provide the operator with information to determine whether program changes may be warranted.

The program evaluation should:

— pre-test effectiveness of materials,

— assess program implementation,

— measure program effectiveness.

Based on the results of the evaluation, the operator may determine that changes to the program are warranted to meet awareness objectives, including program implementation or elements, such as stakeholder identification, messages, delivery methods, or delivery frequencies. After completing the evaluation process, the operator should document whether changes are needed or not. Table 6 describes methods to evaluate the public awareness program.

9.1 Pre-test Effectiveness of Materials

A focus group is a group of people gathered to provide feedback about the materials or other aspects of a public awareness program. Upon initial design or major redesign of materials, operators should pre-test materials in a focus group before they are distributed.

Typically, a focus group has about 6 to 12 participants. While focus groups may be professionally facilitated, feedback about public awareness materials may be gained by an informal discussion run by individuals connected with the public awareness program. Often participants will be asked to review draft materials and comment on

message clarity and what appealed or did not appeal to them. Focus groups may also be used to provide input on the relative effectiveness of various means of delivery.

Table 6—Program Evaluation Methods

Method	Technique	Frequency
Pre-test effectiveness of materials	Focus groups (in-house or external participants)	Upon initial design or major redesign of public awareness materials
Assess program implementation	Internal self-assessment, third-party assessment, or regulatory inspection	Annually
Measure program effectiveness: — outreach, — message comprehension, — results.	1) *Survey*—Assess outreach efforts, audience knowledge, and any anecdotal changes in behavior if available (refer to Annex D for more guidance): — operator-designed and conducted survey; — use of pre-designed survey by third party or industry association; or — trade association conducted survey segmented by operator, state, or other relevant separation to allow application of results to each operator. 2) Assess notifications and incidents to determine any anecdotal changes in behavior if available. 3) Documented records of incidents to evaluate bottom-line results.	Every four years

Focus group participants may be operator employees who are not familiar with the public awareness program, citizens living along a pipeline, representatives of homeowner associations, or business people along the pipeline. Target stakeholder audiences generally are not mixed. The participants usually are not chosen at random but rather are selected to be reasonably representative of the stakeholder group and capable of articulating their reactions to the materials.

9.2 Assess Program Implementation

The operator should complete an annual assessment of the program to answer the following questions.

— Has the program been developed and written to address the objectives, elements, and baseline schedule as described in this RP?

— Has the written program been implemented as planned and documented appropriately?

The operator should use one of the following three alternative methodologies:

— internal self-assessment,

— contract with a third party to conduct an assessment,

— regulatory inspections.

See Annex C for a sample set of questions that may aid an operator in conducting an internal self-assessment.

9.3 Measure Program Effectiveness

Effectiveness measurements should be conducted. Several different methodologies, either quantitative or qualitative, may be used. Options to measure attitudes and opinions may include the following:

— surveys (mail, phone, Internet):

  - develop and conduct a survey using internal or external expertise,
  - participate in a joint survey,

— focus groups (mail, phone, Internet);

— data reports;

— analyses of business reply cards.

Program effectiveness measurement is meant to validate the operator's methodologies and the content of the materials used at least every four years. Upon initial measurement, improvements should be incorporated into the program based on the results. Once validated in this initial manner, program effectiveness measurement should be conducted at least once every four years. However, additional measurement may be appropriate to validate a program after major design changes.

NOTE For example, if an operator began implementing its program on June 20, 2006, then program effectiveness measurement would be due by June 20, 2010. Subsequent measurement should be conducted every four years. In this example, future measurement would be due by June 20, 2014. The following three measures describe what areas the operator should evaluate for effectiveness.

— *Measure 1*—Outreach.

— *Measure 2*—Message comprehension.

— *Measure 3*—Achieving results.

Operators are encouraged to collect anecdotal information that may provide insight into actual behavioral changes whenever the opportunity arises. Operators would like to know that stakeholders are aware of what to do and that they have acted on that knowledge appropriately (performing the correct prevention and mitigation behaviors according to circumstances). However, information on actual behavior by the stakeholder is rarely available. Anecdotal information regarding actual stakeholder behavior can be used along with other effectiveness measurement information. In some circumstances, it may be possible to ask the stakeholders what actions were taken in a given situation, e.g. such as during a post-incident inquiry of how individuals responded. In other situations, information such as notifications received by the operator from the One Call Center (e.g. a noticeable increase following distribution of public awareness materials) may help demonstrate that stakeholders performed desired behaviors.

9.3.1 Measure 1—Outreach

To help assess if public awareness messages are getting to the intended stakeholders and to evaluate the effectiveness of the delivery methods used, an operator should track the number of individuals or entities attempted to be reached within an intended stakeholder audience (e.g. affected public, excavators, public officials, and emergency officials) and estimate the percentage for each intended stakeholder audience actually reached within the targeted geographic area(s). An operator may want to consider tracking the number of:

— phone inquiries received by an operator,

— visits to the public awareness portions of an operator's website,

— response cards received by an operator,

— public officials or emergency officials who attend emergency response exercises (this is an indicator of interest and the opportunity to gain knowledge).

9.3.2 Measure 2—Message Comprehension

To evaluate the effectiveness of the message content, an operator should measure the following:

— the percentage of the intended stakeholders that understood the message,

— the retention rate of the stakeholders and specific messages.

One possible method for assessing understandability is to survey the target stakeholder audience through personal, telephone or written surveys. Sample surveys are included in Annex D. Factors to consider when designing surveys include the following.

— Sample size appropriate to draw general conclusions.

— Questions to gauge understandability of messages and knowledge of survey respondent. For example, one question could ask how a person might respond in a hypothetical situation, such as, “If you observed a suspected leak in a pipeline, what would you do?”

— Retention of messages.

9.3.3 Measure 3—Achieving Results

One measure of the “bottom-line results” is the change in the number and consequences of third-party incidents. As a baseline, the operator should track the number of incidents and consequences caused by third-party excavators. If available, other data to be considered may include reported near misses, reported pipeline damage occurrences that did not result in a release, and third-party excavation damage events that resulted in pipeline failures. While third-party excavation damage is a major cause of pipeline incidents, data regarding such incidents should be evaluated over a relatively long period of time to determine any meaningful trends relative to the operator’s public awareness program. This is due to the low frequency of such incidents on a specific pipeline system. The operator should also look for other types of bottom-line measures.

10 Documentation

Each operator should collect and retain documentation of the public awareness program. These records demonstrate that an operator’s program is in conformance with the recommendations of this RP. Documentation can be challenging due to inconsistent reporting formats from various sources, decentralized activities and collaborative efforts. Documentation allows the program administrator to review the public awareness program, to brief management, and to demonstrate compliance with regulatory requirements.

10.1 Written Program Documentation

The written program should include the following:

— a statement of management commitment to achieving effective public/community awareness;

— a description of the roles and responsibilities of personnel administering the program;

— identification of key personnel and their titles (including management responsible for program support through company policy, management participation, and allocation of resources and funding of the program);

— identification of the media and methods of communication to be used in the program;

— documentation of the frequency and the basis for selecting that frequency for communicating with each of the targeted audiences;

— the process for identifying program enhancements beyond the baseline program, including the basis for implementing such enhancements;

— the program evaluation process, including the evaluation objectives, methodology to be used to perform the evaluation and analysis of the results, and criteria for program improvement based on the results of the evaluation.

10.2 Other Documentation Records

Following are more examples of documentation records:

— communication materials provided to each stakeholder audience (e.g. brochures, mailings, letters, etc.);

— lists, records, or other documentation of stakeholder audiences with whom the operator has communicated (e.g. contact mailing rosters);

— implementation dates;

— postage receipts;

— response cards;

— audience contact documentation (e.g. sign-in sheets, invitation lists, etc.);

— program evaluations, including current results, follow-up actions and expected results;

— program enhancement(s).

In addition, some operators are required to have an operations and maintenance manual under 49 *CFR* Part 192 or 195. While the overall written program will likely be too extensive and schedule-specific to be suitable for the manual, the operator should, at a minimum, include a reference to the public awareness program.

10.3 Record Retention

The record retention period should be a minimum of five (5) years, or as defined in the operator's public awareness program, whichever is longer. Record retention should include:

— lists, records, or other documentation of stakeholder audiences with whom the operator has communicated;

— copies of all materials provided to each stakeholder audience;

— all program evaluations, including current results and follow-up actions.

Annex A
(informative)

Baseline and Enhanced Program Summary Tables

The tables below summarize the baseline and enhanced messages, delivery methods, and delivery frequencies for conducting public awareness programs for operators of hazardous liquid and gas transmission pipelines, local natural gas distribution pipelines, and gathering pipelines. The tables are not meant to include every possible enhanced program element. Operators may choose to communicate more frequently using additional messages and methods. Section 4 through Section 10 provide additional guidance for developing, implementing, and enhancing public awareness programs.

Table A.1—Hazardous Liquids and Natural Gas Transmission Pipeline Operators

<table>
<tr><th colspan="2">Affected Public</th></tr>
<tr>
<td>Baseline Program

Frequency
— 2 years

Messages
— Damage prevention
— Leak/damage recognition and response
— One Call requirements
— Pipeline location information
— Potential hazards
— ROW encroachment

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by the operator

NOTE Operators of storage or other major operational facilities may consider additional frequency to residents for special incident response notification and evacuation measures. See 6.13.

Messages
— How to get additional information
— Integrity management overview
— NPMS
— Pipeline purpose and reliability
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
<tr><th colspan="2">Emergency Officials</th></tr>
<tr>
<td>Baseline Program

Frequency
— 1 year

Messages
— Emergency preparedness communications
— Leak/damage recognition and response
— NPMS
— Pipeline location information
— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by operator

Messages
— How to get additional information
— Integrity management overview
— Pipeline purpose and reliability
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
</table>

Table A.1—Hazardous Liquids and Natural Gas Transmission Pipeline Operators (Continued)

<table>
<tr><th colspan="2">Public Officials</th></tr>
<tr>
<td>Baseline Program

Frequency
— 3 years

Messages
— Damage prevention
— Leak/damage recognition and response
— NPMS
— One Call requirements
— Pipeline location information
— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by operator

NOTE If subject to integrity management rules under either 49 CFR Part 192 or 49 CFR Part 195 and in HCA, then contact as appropriate per applicable rule.

Messages
— Emergency preparedness
— How to get additional information
— Pipeline purpose and reliability
— ROW encroachment
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
<tr><th colspan="2">Excavators</th></tr>
<tr>
<td>Baseline Program

Frequency
— 1 year

Messages
— Damage prevention
— Leak/damage recognition and response
— One Call requirements
— Pipeline location information
— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by operator

Messages
— How to get additional information
— Pipeline purpose and reliability
— ROW encroachment
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
</table>

Table A.2—Local Distribution System Operators

<table>
<tr><th colspan="2">Affected Public</th></tr>
<tr>
<td>Baseline Program

Frequency
— 1 year for customers
— 2 years for non-customers

Messages
— Damage prevention
— Leak/damage recognition and response
— One Call requirements
— Pipeline location information
— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by operator

Messages
— How to get additional information
— Pipeline purpose and reliability
— ROW encroachment
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
<tr><th colspan="2">Emergency Officials</th></tr>
<tr>
<td>Baseline Program

Frequency
— 1 year

Messages
— Emergency preparedness
— Leak/damage recognition and response
— Pipeline location information
— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Personal contact
— Targeted distribution of print materials</td>
<td>Enhanced Program

Frequency
— As determined by operator

Messages
— How to get additional information
— Pipeline purpose and reliability
— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:
— Electronic communication
— Mass media
— Personal contact
— Targeted distribution of print materials</td>
</tr>
</table>

Table A.2—Local Distribution System Operators (Continued)

Public Officials	
Baseline Program *Frequency* — 3 years *Messages* — Damage prevention — Leak/damage recognition and response — One Call requirements — Pipeline location information — Potential hazards *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Personal contact — Targeted distribution of print materials	**Enhanced Program** *Frequency* — As determined by operator *Messages* — Emergency preparedness — How to get additional information — Pipeline purpose and reliability — ROW encroachment — Prevention measures *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Mass media — Personal contact — Targeted distribution of print materials
Excavators	
Baseline Program *Frequency* — 1 year *Messages* — Damage prevention — Leak/damage recognition and response — One Call requirements — Pipeline location information — Potential hazards *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Mass media — Personal contact — Targeted distribution of print materials	**Enhanced Program** *Frequency* — As determined by operator *Messages* — How to get additional information — Pipeline purpose and reliability — Prevention measures *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Mass media — Personal contact — Targeted distribution of print materials

Table A.3—Gathering Pipeline Operators

<table>
<tr><th colspan="2">Affected Public</th></tr>
<tr>
<td>

Baseline Program

Frequency

— 2 years

Messages

— Damage prevention

— Leak/damage recognition and response

— One Call requirements

— Pipeline location information

— Potential hazards

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:

— Electronic communication

— Mass media

— Personal contact

— Targeted distribution of print materials

</td>
<td>

Enhanced Program

Frequency

— As determined by operator

NOTE Operators of sour gas or sour crude pipelines may consider annual contact to the affected public to provide special emergency procedures. See Section 6.13.

Messages

— How to get additional information

— Pipeline purpose and reliability

— ROW encroachment

— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:

— Electronic communication

— Mass media

— Personal contact

— Targeted distribution of print materials

</td>
</tr>
<tr><th colspan="2">Emergency Officials</th></tr>
<tr>
<td>

Baseline Program

Frequency

— 1 year

Messages

— Emergency preparedness communications

— Leak/damage recognition and response

— Pipeline location information

— Potential hazards

— Special emergency procedures if sour gas or sour crude

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:

— Electronic communication

— Personal contact

— Targeted distribution of print materials

</td>
<td>

Enhanced Program

Frequency

— As determined by operator

Messages

— How to get additional information

— Pipeline purpose and reliability

— Prevention measures

Methods—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include:

— Electronic communication

— Mass media

— Personal contact

— Targeted distribution of print materials

</td>
</tr>
</table>

Table A.3—Gathering Pipeline Operators (Continued)

Public Officials	
Baseline Program *Frequency* — 3 years *Messages* — Damage prevention — Leak/damage recognition and response — One Call requirements — Pipeline location information — Potential hazards *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Personal contact — Targeted distribution of print materials	**Enhanced Program** *Frequency* — As determined by operator NOTE If subject to integrity management rules under either 49 *CFR* Part 192 or 49 *CFR* Part 195 and in HCA, then contact as appropriate per applicable rule. *Messages* — Emergency preparedness communications — How to get additional information — Pipeline purpose and reliability — ROW encroachment — Special emergency procedures if sour gas or sour crude — Prevention measures *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. General categories include: — Electronic communication — Mass media — Personal contact — Targeted distribution of print materials
Excavators	
Baseline Program *Frequency* — 1 year *Messages* — Damage prevention — Leak/damage recognition and response — One Call requirements — Pipeline location information — Potential hazards *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. Some examples are: — Targeted distribution of print materials — Personal contact — Electronic communication — Mass media	**Enhanced Program** *Frequency* — As determined by operator *Messages* — Hazard awareness and prevention measures — How to get additional information — Pipeline purpose and reliability — ROW encroachment — Prevention measures *Methods*—Determined by operator based on specifics of pipeline segment or environment. See Section 7 for available options. Some examples are: — Targeted distribution of print materials — Personal contact — Electronic communication — Mass media

Annex B
(informative)

Resources

B.1 Trade Associations

The major pipeline industry trade associations take an active role in sponsoring efforts to help operators meet public awareness objectives. The websites of these associations provide a wide range of information to assist operators in developing and managing public awareness programs and developing information to use in implementing them. The trade associations also undertake specific efforts in public outreach, such as the following:

— printing of pipeline safety brochures that may be customized by the operator;

— development and distribution of pipeline safety decals and materials;

— development of videos and brochures to aid in the education of public officials regarding pipeline emergency response;

— development of website information specifically for pipeline public awareness;

— distribution of periodic newsletters that provide additional guidance and information to operators on issues related to public awareness programs;

— development and sponsorship of television and radio PSAs;

— participation in appropriate trade shows to inform excavators, regulators, legislators, and others.

For additional information on these efforts, contact the trade associations below directly.

American Gas Association (AGA)
www.aga.org
400 N. Capitol St., NW
Suite 450
Washington, DC 20001

American Petroleum Institute (API)
www.api.org
1220 L St., NW
Washington, DC 20005

American Public Gas Association (APGA)
www.apga.org
201 Massachusetts Ave., NE
Suite C-4
Washington, DC 20002

Association of Oil Pipe Lines (AOPL)
www.aopl.org
1808 Eye St., NW
Washington, DC 20006

Interstate Natural Gas Association of America (INGAA)
www.ingaa.org
10 G St., NE
Washington, DC 20002

B.2 Government Agencies

Some state agencies with regulatory authority for pipeline safety provide training and materials for public awareness programs or sponsor or conduct pipeline public awareness efforts. At the federal level, PHMSA is a source of relevant information. Contact information for federal regulators is below.

Pipeline and Hazardous Materials Safety Administration (PHMSA)
www.phmsa.dot.gov
U.S. Department of Transportation
East Building, 2nd Floor
1200 New Jersey Ave., SE
Washington, DC 20590

The National Pipeline Mapping System (NPMS)
www.npms.phmsa.dot.gov
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Ave., SE
Area E24-462
Washington, DC 20590

B.3 Private Organizations and Other Resources

B.3.1 Common Ground Alliance (CGA)

CGA (www.commongroundalliance.com) at 1421 Prince St., Suite 410, Alexandria, Virginia 22314, is a nationally recognized non-profit organization dedicated to shared responsibility in damage prevention. It oversees the "Dig Safely" campaign (www.digsafely.com), promotes 811 (www.call811.com), and has created best practices for protection of underground facilities. CGA sponsorship and membership are open to all stakeholder organizations that want to support the CGA's damage prevention efforts. For information on the Damage Information Reporting Tool (DIRT), a web-based application for the collection and reporting of underground damage information, please visit www.cga-dirt.com.

B.3.2 Outside Consultants

Many outside consultants are available to support an operators' public awareness program. Direct-mail vendors may produce and distribute pipeline safety materials. They may help identify residents and other stakeholders, such as excavators along the pipeline route. Public relations firms are also available to assist operators in developing material specifically geared to the intended audience. Their expertise may help heighten the readability of public awareness materials and improve the operator's overall success in communicating the intended message. Research firms may be used to help operators measure the effectiveness of the programs.

B.3.3 Other Pipeline Companies

Pipeline companies have developed a variety of creative ways to meet public awareness objectives. Cooperative information exchanges or shared public awareness activities between operators may be beneficial and economical.

B.4 Publications

The AGA's Gas Piping Technology Committee's (GPTC Guide)—ASC GPTC Z380.1.

Hazards Associated with Striking Underground Gas Lines, www.osha.gov/dts/shib/shib_05_21_03_sugl.pdf.

B.5 One Call Centers

One Call Centers promote public safety, protect underground facilities (including pipelines), and minimize service interruptions by processing locate requests and providing damage prevention awareness education. All states and the District of Columbia have established One Call Centers (some states may have multiple One Call Centers). Some One Call Centers develop public awareness information materials and gather extensive information about excavation contractors. If available to the pipeline operator, this information may be useful to fulfill regulatory requirements. Many One Call Centers perform their own public awareness outreach through PSAs, community events, advertising, and other methods. Some One Call Centers also sponsor statewide excavation hazard awareness programs.

Annex C
(informative)

Sample Annual Internal Self-assessment [2]

An internal self-assessment is one methodology to complete an annual evaluation of the program as described in 9.2 to assess program implementation.

Program Implementation Internal Self-assessment

For Company: _____

Date of Assessment: _____ Assessment Conducted By: _____

What Period Does Assessment Cover? _____

I. *Program Development and Documentation*—Has the public awareness program been developed and written to address these objectives, elements, and baseline schedule as described in Section 5 and Annex A of API RP 1162?

1) Does the operator have a written public awareness program?

Yes ☐ No ☐

2) Does the written program address all of the objectives of this RP as defined in 5.1?

a) Raise the awareness of stakeholder audiences of the presence of pipelines in their communities and of their role they can play in helping to prevent pipeline emergencies and releases.

Yes ☐ No ☐

b) Help stakeholder audiences understand that pipeline accidents are rare and that pipelines are a safe mode of transportation.

Yes ☐ No ☐

c) Help stakeholder audiences understand how to prevent pipeline emergencies.

Yes ☐ No ☐

d) Help stakeholder audiences understand how to respond to a pipeline emergency.

Yes ☐ No ☐

3) Does the documented program address regulatory requirements identified in Section 2 of API 1162 and other regulatory requirements that the operator must comply with?

Yes ☐ No ☐

4) Does the operator have a plan that includes a schedule for conducting program activities?

Yes ☐ No ☐

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[2] Work sites and equipment operations may differ. Users are solely responsible for assessing their specific equipment and premises in determining the appropriateness of applying the instructions. At all times users should employ sound business, scientific, engineering, and judgment safety when using this Recommended Practice.

II. *Program Implementation*—Has the public awareness program been implemented according to the written program?

1) Has the program been updated to reflect significant organizational and or major pipeline system changes?

Yes ☐ No ☐

2) Does the program include a schedule for conducting program activities?

Yes ☐ No ☐

3) Have monetary budgets and the required resource been developed and identified?

Yes ☐ No ☐

4) Have the required tasks needed to implement the program been identified and assigned to company employees and/or external consultants?

Yes ☐ No ☐

5) Have the required program activities been conducted and completed (e.g. targeted distribution of print materials or personal contact)?

Yes ☐ No ☐

6) Has the program been updated with newly identified activities?

Yes ☐ No ☐

Newly identified activities include:

III. *Measuring Program Effectiveness*—Has the public awareness program been evaluated for effectiveness according to the written program?

1) Does the operator have documentation of the results of evaluating the program for effectiveness?

Yes ☐ No ☐

If Yes, provide date of program evaluation and attach supporting materials.

If No, provide anticipated date for measuring program effectiveness.

2) Are the results of the evaluation of program effectiveness being used to improve the program or determine if supplemental actions (e.g. revised messages, additional delivery methods, increased frequency) are needed in some locations?

Yes ☐ No ☐

If Yes, provide summary of program improvements and supplemental activities conducted during reporting cycle.

IV. *Program Documentation*—Has the public awareness program been documented according to the written program?

1) Has the public awareness program been documented according to Section 10?

Yes ☐ No ☐

2) Is there a statement of management commitment?

Yes ☐ No ☐

3) Is there a description of the roles and responsibilities of personnel administering the program?

Yes ☐ No ☐

4) Is there a written identification of key personnel and their titles?

Yes ☐ No ☐

5) Has the media and methods of communication used in the program been identified including the basis for selecting the chosen media method?

Yes ☐ No ☐

6) Have the frequency and the basis for selecting that frequency for communicating with each of the targeted audiences been documented?

Yes ☐ No ☐

7) Has the process for identifying program enhancements beyond the baseline program, including the basis for implementing such enhancements, been documented?

Yes ☐ No ☐

8) Has the program evaluation process been documented, including the evaluation objectives, methodology to be used to perform the evaluation and analysis of the results, and criteria for program improvement based on the results of the evaluation?

Yes ☐ No ☐

9) Have the documents required in 10.3 been retained for a minimum of five (5) years?

Yes ☐ No ☐

Baseline Communication(s) Frequency from Section 7 and Annex A

Stakeholder Audience	Frequency	Date Last Completed	Date Due	Date Completed
Affected public				
Emergency officials				
Public officials				
Excavators				

Baseline Communication Method(s) from Section 6 and Annex A

	Affected Public	Emergency Officials	Public Officials	Excavators
Electronic communication	☐	☐	☐	☐
Mass media	☐			☐
Personal contact	☐	☐	☐	☐
Target distribution of print materials	☐	☐	☐	☐

Baseline Message Content Summary from Table 5 and Annex A

	Affected Public	Emergency Officials	Public Officials	Excavators
Damage prevention	☐		☐	☐
Emergency preparedness communications		☐		
Leak/damage recognition and response	☐	☐	☐	☐
NPMS		☐	☐	
One Call requirements	☐		☐	☐
Pipeline location information	☐	☐	☐	☐
Potential hazards	☐	☐	☐	☐
ROW encroachment	☐		☐	

Enhanced Message Content Summary from Section 6

	Affected Public	Emergency Officials	Excavators	Public Officials
Information and/or overview of operator's IMP	☐	☐	☐	☐
ROW encroachment prevention	☐	☐	☐	☐
If applicable, provide information about designation of HCA (or other factors unique to segment) and summary of integrity measures undertaken	☐	☐	☐	☐

_____ _____

Signature Date

Annex D
(informative)

Additional Information on Surveying

D.1 Type of Survey

Surveys may be conducted in person, over the phone, or via mail questionnaires. Mail and telephone surveys are usually more cost-effective. All survey vehicles have advantages and disadvantages.

D.2 Sample Size

Typically, a survey is designed to reach a random number of the targeted stakeholder audience. A variation on the random sample when conducting surveys in person is a “cluster sample” in which a block may be chosen at random and then a cluster of several households on the block visited at the same time. That is a relatively efficient way to increase sample sizes and not sacrifice much in statistical validity. The telephone numbers for affected residents are typically not readily accessible to the operator, although a random survey in a designated zip code or geographic area may include questions on whether the respondent lives or works along the pipeline (to ensure a sufficient number of the affected public is included in the survey). For conducting a survey in person, the operator may work with a random selection of homes or businesses drawn from aerial maps or simply by selecting segments at random to be visited near the pipeline. Mail surveys might be sent to all in a census tract, all in a zip code, or sub-zip code area. Third-party experts in conducting surveys may readily assist, at least for the first time a survey is attempted.

D.3 Statistical Confidence

There is typically concern about statistical reliability. Often this leads to needlessly expensive surveys when one really only needs to know the approximate percentage of the target group that has been reached and is knowledgeable.

In deciding sample size, the following simplification should be considered.

The statistical error associated with a random survey is approximated by $1/\sqrt{n}$ where *n* is the size of the sample. A sample of 100 gives an accuracy of approximately, $1/\sqrt{100}$ or about 10 %.

There are a number of detailed assumptions behind that approximation, which is more valid the larger the total population to be surveyed. For smaller populations, the sampling error is actually even smaller than that approximation. Very modest-size surveys may be used for evaluating pipeline safety for public awareness and still have statistical validity to support broad conclusions that, in turn, drive changes (as necessary) or support continuation (when supported) to the public awareness program.

D.4 Content

Different sets of questions are needed for different audiences. There obviously would be a different set of questions asked of households along a pipeline versus those asked of excavators. The survey questionnaire should be clear, brief, and pre-tested to increase the participation and minimize the cost. Operators should try to keep the questions the same over time so that trends may be evaluated. The questions may be yes/no, multiple choice, or open-ended. It is easier to analyze data from multiple choice or yes/no questions than open-ended questions; the latter require someone to read and interpret them and then complete computer-readable tallies or do a tally by hand. A combination of both open-end and multiple-choice questions may be used. A survey may focus on only one program element or several elements.

Some thought is needed as to whether it is better to get open-ended responses that do not prompt the respondent, to avoid bias. A short example: One might be tempted to ask, “What number would you call if you saw a release from a pipeline,” but that question already assumes somebody would look up a number, which may

be what you are trying to determine. A less biased question would be, “What would you do if you saw a break in a pipeline?”

D.5 Sample Survey Questions

Below are sample questions by stakeholder group. They are not a complete ready-to-use survey. They are a starting point, intended to help operators craft questions that work best for them. To accomplish this, operators may find it helpful to work with a professional survey company. Other industry trade groups may also provide sample survey questions.

Although some of the questions below may work for one or more operators, in many cases they would need to be modified. Some of the questions may be more appropriate for transmission and gathering operators than for distribution companies although many may work for all types of pipeline companies. The operator will have to review the questions to determine if they are appropriate for a telephone survey or a mail survey. The operator may need to modify the questions depending on the type of survey to be conducted.

Because hiring a professional survey company could be costly, operators may want to explore all options, including participating in a joint operator survey program. Industry trade associations may have information about such programs.

Affected Public

1) In the last year [or 2 years], have you seen or heard any information relating to pipeline safety? (If No, skip to question 4.)

2) How did you receive the information? (Check all that apply.)
   a) Written material through mail
   b) Face-to-face meeting
   c) Calendars
   d) Handouts/inserts/flyers
   e) Newspaper
   f) Television
   g) Radio
   h) Internet
   i) School info (brought home by children)
   j) Posted information (e.g. on or near pipeline)
   k) Other (please specify_____)
   l) Can’t recall/don’t know

3) Which, if any, of the following topics were discussed in the information you received?
   a) Presence/location of pipeline in your community
   b) Potential hazards
   c) Recognizing or detecting a pipeline leak
   d) How to respond to a pipeline leak
   e) Calling 811 or One Call before you dig
   f) Encroaching on the pipeline right-of-way
   g) Don’t remember

4) Have you or has anyone in your household ever tried to obtain information about pipeline safety in the last 12 months?

5) Do you agree or disagree that your local pipeline operator has been doing a good job of informing people like you about pipeline safety?
   a) Strongly agree
   b) Agree
   c) Disagree
   d) Strongly disagree
   e) Don't know

6) Have you ever passed information about pipeline safety to someone else in your family or community?

7) Do you live close to a liquid or natural gas pipeline or other pipeline facility?
   a) Yes
   b) No
   c) Don't know

8) Have you ever seen location/warning markers signs for underground pipelines?

9) Have you ever called a pipeline operator, 911, or anyone else to report suspicious activity near a pipeline?

10) From what you have read, heard, or from your own experience, what are the kinds of things that might tell you that a pipeline is leaking? (Check all that apply.)
   a) Wet soil
   b) Odor of rotten eggs or petroleum
   c) A hissing sound
   d) Bubbles in a pond of standing water
   e) Dirt blowing
   f) Pool of liquid
   g) A vapor cloud near pipeline
   h) Dead vegetation
   i) Ice or frozen soil
   j) Sheen on water

11) If you suspect a pipeline leak who is the first party you would call to report the problem?
   a) Police
   b) Fire
   c) 911
   d) Pipeline company
   e) Other (specify)
   f) Not sure

12) If you were planning to dig on your property, what are the best safety practices to follow?
    a) Call pipeline company
    b) Check to make sure there are no pipelines below the surface
    c) Call 811 or One Call number to have buried pipelines located
    d) Turn off gas
    e) Other (specify)
    f) Not sure

13) Have you ever heard of 811 or another free One Call number which people can call before digging to have underground facilities such as pipelines marked?

Emergency Officials

1) In which of the following specialties do you work?
    a) Fire service
    b) Law enforcement
    c) Hazardous materials
    d) Medical
    e) Emergency management
    f) Other (please specify_____)

2) Do you know where the nearest liquid or gas pipeline is in or near your community? (If No, tell them after the interview.)

3) Do you know the name of your local pipeline operator/local natural gas company? (If No, skip to question 5.)

4) If Yes, who?

5) If you wanted to know where hazardous liquids or natural gas pipelines were located in your area of responsibility, where do you think would be the best place to go for that information?
    a) National Pipeline Mapping System (NPMS)
    b) Phone book, library
    c) Call company in my area
    d) Other
    e) Don’t know

6) Are you aware of the National Pipeline Mapping System operated by the U.S. Department of Transportation? It is sometimes referred to as the NPMS.
    a) Yes
    b) No
    c) Not sure

7) If your department received a report of a pipeline leak, do you know what number to call to alert the pipeline company or do you know where to get their number?
   a) Know the number
   b) No but I can get number
   c) Not sure/don't know

8) Does your community have sufficient knowledge, training and equipment to respond to a pipeline leak emergency? (If Yes, skip to question 10.)
   a) Yes
   b) No
   c) Don't know

9) If no, please explain.

10) During the last year, have you seen, heard, or received any information regarding pipeline safety? (If No, skip to question 12.)

11) If Yes, please describe.

12) In general, do you feel you need additional information from pipeline companies?
   a) Yes
   b) No

13) How would you prefer to receive pipeline safety information? (Choose two.)
   a) Television
   b) Radio
   c) Newspaper
   d) Emergency response trade publications
   e) Internet or e-mail
   f) Direct mail
   g) Classes at your place of work
   h) Seminars

14) Have you or anyone in your department to your knowledge met with any representatives of the pipeline company to discuss pipeline safety within the last 12 months?

15) As you may know, the pipeline industry uses markers or signs to identify the location of buried pipelines. As best as you can recall, what information is contained on the pipeline markers? (Choose all that apply.)
   a) Name of pipeline company
   b) What material is in the pipe
   c) Emergency number to call
   d) Other
   e) Not sure

16) From your training to date or your personal experience, which of the following conditions would indicate a pipeline leak?
    a) Wet soil
    b) Odor of rotten eggs or petroleum
    c) A hissing sound
    d) Bubbles in a pond of standing water
    e) Dirt blowing
    f) Pool of liquid
    g) A vapor cloud near pipeline
    h) Dead vegetation
    i) Ice or frozen soil
    j) Sheen on water

17) To the best of your knowledge, do the following result from a pipeline leak? (Choose all that apply.)
    a) Escaping gasses or liquids can ignite and burn
    b) Oxygen can be displaced
    c) Serious skin irritations are possible
    d) Water supplies can become contaminated

18) Do you have a response plan or standard procedures for responding to a pipeline leak?

19) Have you participated in any training to deal with a pipeline leak?

20) Are there any suggestions you would make about how to improve future communications to people such as yourself about pipeline safety and response to incidents?

Public Officials

1) Do you have oil and natural gas pipelines in your community?

2) Do you know the names of pipeline operators/local natural gas companies in your community?

3) In the past 12 months, have you personally received information regarding pipeline safety? (If No, skip to question 7.)

4) If Yes, how have you received the information?
    a) Regular mail
    b) Pipeline safety classes
    c) At seminars
    d) Personal meetings with a representative of a pipeline company
    e) E-mail communications
    f) On Internet safety sites
    g) From your department
    h) From local gas companies
    i) From federal safety agencies
    j) From state safety agencies
    k) From the pipeline industry
    l) Other

5) Which, if any, of the following topics were discussed in the information you received?
   a) Presence/location of pipelines in your community
   b) Potential hazards and damage prevention
   c) Recognizing or detecting a pipeline leak
   d) How to respond to a pipeline leak
   e) Calling 811 or One Call before you dig
   f) National Pipeline Mapping System (NMPS)
   g) Don't remember

6) How would you rate the adequacy of information you have about pipeline safety (e.g. how to recognize a leak, what to do when there is a leak, what emergency officials should do, etc.)?
   a) About right
   b) Too much
   c) Not enough

7) What specific type of information do you need about pipeline safety?

8) Considering your own work style, what would you say is the best way for you to receive information regarding pipeline safety? (Choose two.)
   a) Regular mail
   b) Pipeline safety classes
   c) At seminars
   d) Personal meetings with a pipeline company representative
   e) E-mail communications
   f) Internet safety sites
   g) Other

9) Do you know or know where to find the number to call at the pipeline/local natural gas company if there is an incident, e.g. a pipeline leak or pipeline damage?

10) Do you know what number to call at the pipeline/local natural gas company for additional information?

11) Do you know about the national Call Before You Dig number, 811, or your local One Call Center number?

12) Does your community have an emergency response plan to deal with a pipeline/leak (regardless of whether intentional or accidental)?

13) What should excavators do before digging to avoid damage to pipelines?
   a) Call pipeline company
   b) Confirm the location of pipelines, if any, within the excavation area
   c) Call 811 or One Call number to have buried pipelines located
   d) Turn off gas
   e) Other (specify)
   f) Not sure

14) Have you passed pipeline safety information on to residents or others in your organization?

15) How do you distribute the information in your organization?

16) Do you feel your community is prepared to deal with a pipeline leak?

17) Pipeline companies in your community have been trying to increase awareness of pipeline safety issues. Prior to my call today, were you aware of these safety education efforts?

18) Are you familiar with the U.S. Department of Transportation's National Pipeline Mapping System (NPMS) that makes information about the location of pipelines publicly accessible?

Excavators

1) In the last 12 months, have you been contacted or received information from [pipeline company/local natural gas distribution] regarding pipeline safety? (If No, skip to question 3.)

2) If Yes, what was the source?
   a) Telephone call
   b) Mail
   c) Visit or meeting
   d) E-mail
   e) Sign or billboard
   f) Other

3) Have you received information from any other sources about pipeline safety? (If No, skip to question 5.)

4) If Yes, which? Please specify_____

5) Have you contacted [pipeline operator/local natural gas distribution company name] in the past year to inquire about the location of pipelines? (If No, skip to question 8.)

6) If Yes, about how many times?

7) If Yes, how did you make the contact?
   a) Telephone
   b) E-mail
   c) Letter
   d) Face-to-face
   e) Other

8) How often would you say your company personnel verify whether a pipeline exists before digging?
   a) Always
   b) Usually
   c) Sometimes
   d) Rarely or never
   e) Don't know/unsure

9) If not always, why not?
   a) Didn't know where to get information
   b) Not necessary
   c) Didn't think about it
   d) Takes too much time
   e) Think we can tell where pipeline is on our own
   f) Other

10) Are you aware of a notification service provided by your state called One Call? (If No, skip to question 12.)
   a) Yes
   b) No/unsure

11) When did you first become aware of the notification service provided by your local or state One Call center?
   a) Before I became involved in excavating
   b) When I first became involved in excavating
   c) Sometime after I became involved in excavating
   d) After receiving information from a pipeline company
   e) Can't recall

12) Are you aware of the 811 Call Before You Dig toll-free phone number? (If No, skip to question 14.)
   a) Yes
   b) No/unsure

13) When did you first become aware of the 811 Call Before You Dig toll-free phone number?
   a) Before I became involved in excavating
   b) When I first became involved in excavating
   c) Sometime after I became involved in excavating
   d) After receiving information from a pipeline company
   e) Can't recall

14) How frequently would you say you contact your local One Call Center regarding pipeline locations?
   a) Always
   b) Usually
   c) Sometimes
   d) Rarely or never
   e) Don't know/unsure

15) How frequently would you say you contact 811 regarding pipeline locations?
   a) Always
   b) Usually
   c) Sometimes
   d) Rarely or never
   e) Don't know/unsure

16) How do you share information with your employees on who to call before digging?
    a) Post it
    b) Discuss in meetings
    c) E-mail
    d) Calls
    e) Put in company's written procedures
    f) Put in company newsletter
    g) Other

17) Has your company ever unexpectedly encountered a pipeline while digging? (If No, skip to question 19.)

18) If Yes, how often has this occurred? Explain whether pipeline location was unknown and why.

19) Using any number on a zero to ten scale, where zero means you are not at all confident and ten means you are completely confident, how confident are you with the each of the following?
    a) In your ability to recognize temporary facility markings? Rating _____
    Not Applicable, I neither excavate nor supervise excavators _____
    b) In your ability to use temporary facility markings? Rating _____
    Not Applicable, I neither excavate nor supervise excavators _____

20) To the best of your knowledge, do the following hazards result from a pipeline leak? (Check all that apply.)
    a) The soil becomes wet
    b) Gases or liquids can ignite and burn
    c) Oxygen can be displaced
    d) Serious skin irritations are possible
    e) Water supplies can become contaminated

21) Which of the following conditions indicate a pipeline leak? (Check all that apply.)
    a) Wet soil
    b) Odor of rotten eggs or petroleum
    c) A hissing sound
    d) Bubbles in a pond of standing water
    e) Dirt blowing
    f) Pool of liquid
    g) A vapor cloud near pipeline
    h) Dead vegetation
    i) Ice or frozen soil
    j) Sheen on water

22) Using any number on a zero to ten scale, where zero means you are not at all confident and ten mean you are completely confident, how confident are you:
    a) In your ability to recognize a pipeline leak? Rating _____
    b) In knowing how to respond to a pipeline leak? Rating _____

23) In the event of a pipeline leak, should you take the following actions? (Check all that apply,)
   a) Stop the leak before it gets worse
   b) Avoid any actions that could create a spark or flame
   c) Turn off the machinery and equipment
   d) Evacuate the area
   e) Leave the area and walk upwind a safe distance
   f) Secure the area by keeping others away
   g) Call 911 and then the facility owner
   h) Assist emergency and pipeline personnel when they arrive
   i) Close pipeline valves

24) (Local Company) and the (XXX) Gas/Pipeline Association have efforts underway to increase awareness of pipeline safety issues. Prior to my call today, how aware of these safety education efforts were you?
   a) Very aware
   b) Somewhat aware
   c) Somewhat unaware
   d) Not at all aware
   e) Don't know/unsure

25) Please tell me how you would prefer to see, hear, or receive information about gas pipeline safety issues and precautions? (Choose two)
   a) TV news
   b) School/classes/seminars
   c) TV advertising
   d) Fairs and events
   e) Radio news
   f) Friends/neighbors/relatives
   g) Radio advertising
   h) Co-workers
   i) Newspaper stories
   j) Employer
   k) Newspaper ads
   l) Government agency
   m) Billboards
   n) Utility company
   o) Brochures
   p) Internet/web
   q) Newspaper inserts
   r) Mailings/direct mail
   s) Other

26) What suggestions do you have to improve future communications about pipeline safety information to people such as yourself?

27) If information were sent to you would you prefer to receive it in English, another language, or both?
    a) English
    b) Other language (please specify _____)
    c) Both

28) Which actions have you taken or been involved in taking?
    a) Called to report suspicious or unusual activity near a pipeline
    b) Passed pipeline safety information on to others besides employees
    c) Talked to employees about pipeline safety precautions

Additional Survey Questions for Distribution Companies

1) Do you have natural gas service at your home or business?

2) Is the name of your gas company [insert gas company name]?

3) Have you received written natural gas safety information with a gas bill in the past 12 months? Suggest that this question and question 4 have consistent language regarding "written natural gas safety information/written safety material."

4) Have you received written safety material from [insert gas company name] other than in a natural gas bill mailed to your home?

5) Would you light a match if you smelled gas inside your house?

6) What should you do if you see a yellow flame on a gas appliance?
    a) Nothing
    b) Call a qualified repairperson or your gas company as the appliance may need a safety adjustment

7) What does natural gas smell like?
    a) Sulfur or rotten eggs
    b) No smell at all
    c) Sweet smell
    d) Burnt wood
    e) Don't know

8) Do you agree or disagree that your local gas company has been doing a good job of informing people like you about pipeline safety?
    a) Agree
    b) Disagree
    c) Don't know

[Optional] If you disagree, why?

Annex E
(informative)

Public Awareness Program Checklist [3]

The following sample checklist is compiled from the written text of API 1162 and can be used by the operator as a guide in implementing its public awareness program. The checklist is simply a tool that can be used at any phase, whether it's initial design or subsequent modification. As an example, if you are designing a new brochure, the checklist can be used to double-check that all required elements have been included. This sample checklist is by no means an all inclusive list and is not intended to cover all possible public awareness activities.

Public Awareness Elements Checklist

Define objectives
Awareness ☐
Prevention ☐
Response ☐
Obtain management commitment ☐
Establish program administration
Description of roles and responsibilities of personnel administering program ☐
Identify key personnel and titles ☐
Identify pipeline assets ☐
Identify stakeholder audiences
Affected public ☐
Residents located adjacent to transmission pipeline ROW ☐
Residents located along distribution systems ☐
Residents near liquid/natural gas storage and other operational facilities ☐
Residents located along ROW for gathering lines ☐
Places of congregation ☐
Emergency officials
Local, city, county, state, or regional officials, agencies and organizations with emergency response and/or public safety jurisdiction in the area of the pipeline ☐
Public officials
Local, city, county, state or regional officials, agencies, and/or their staff having land use and street/road jurisdiction in the area of the pipeline ☐
Excavators
Companies and local/state government agencies who are involved in any form of excavation activities and/or land development and planning ☐
Determine coverage area ☐

[3] Work sites and equipment operations may differ. Users are solely responsible for assessing their specific equipment and premises in determining the appropriateness of applying the instructions. At all times users should employ sound business, scientific, engineering, and judgment safety when using this Recommended Practice.

Determine baseline messages

Transmission—Affected public

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐
- Right of way encroachment ☐

Transmission—Emergency officials

- Emergency preparedness communications ☐
  - Priority to protect life ☐
  - Emergency contacts ☐
  - Liaison with emergency officials ☐
  - Emergency response plans ☐
  - Emergency drills and exercises ☐
- Leak/damage recognition and response ☐
- National Pipeline Mapping System ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Transmission—Public officials

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- National Pipeline Mapping System ☐
- One Call requirements ☐
- Pipeline location information ☐
- Potential hazards ☐

Transmission—Excavators

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
- Potential hazards ☐

Distribution—Affected public

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
- Potential hazards ☐

Distribution—Emergency officials

- Emergency preparedness communications ☐
  - Priority to protect life ☐
  - Emergency contacts ☐
  - Liaison with emergency officials ☐
  - Emergency response plans ☐
  - Emergency drills and exercises ☐
- Leak/damage recognition and response ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Distribution—Public officials

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Distribution—Excavators

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Gathering—Affected public

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Gathering—Emergency officials

- Emergency preparedness communications ☐
  - Priority to protect life ☐
  - Emergency contacts ☐
  - Liaison with emergency officials ☐
  - Emergency response plans ☐
  - Emergency drills and exercises ☐
- Leak/damage recognition and response ☐

- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Gathering—Public officials

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Gathering—Excavators

- Damage prevention ☐
  - Suspicious activity ☐
  - Suspected damage ☐
- Leak/damage recognition and response ☐
- One Call requirements ☐
- Pipeline location information ☐
  - Pipeline markers ☐
  - Pipeline mapping ☐
- Potential hazards ☐

Determine baseline delivery frequency

Transmission

- Affected public—2 years ☐
- Emergency officials—1 year ☐
- Public officials—3 years ☐
- Excavators—1 year ☐

Distribution

- Affected public ☐
  - Customer—1 year ☐
  - Non-customer—2 years ☐
- Emergency officials—1 year ☐
- Public officials—3 years ☐
- Excavators—1 year ☐

Gathering

- Affected public—2 years ☐
- Emergency officials—1 year ☐
- Public officials—3 years ☐
- Excavators—1 year ☐

Determine baseline delivery method for each stakeholder audience based on required frequency

- Affected public ☐
  - Electronic communication (videos/CDs or e-mail), or
  - Mass media (PSAs, paid advertising), or
  - Personal contact(door-to-door, telephone, group meetings), or
  - Targeted distribution of print materials

- Emergency officials ☐
  - Electronic communication (videos/CDs or e-mail), or
  - Personal contact (door-to-door, telephone, group meetings), or
  - Targeted distribution of print materials
- Public officials ☐
  - Electronic communication (videos/CDs or e-mail), or
  - Personal contact (door-to-door, telephone, group meetings), or
  - Targeted distribution of print materials
- Excavators ☐
  - Electronic communication (videos/CDs or e-mail), or
  - Mass media (PSAs, paid advertising), or
  - Personal contact (door-to-door, telephone, group meetings), or
  - Targeted distribution of print materials

Implement the program

- Develop a schedule for conducting the program activities ☐
  - Develop resource and monetary budgets ☐
  - Identify, assign and task participating company employees needed to implement the program ☐
  - Identify external resources or consultants needed ☐
  - Conduct program activities ☐
  - Periodically update the program with newly identified activities ☐
  - Collect feedback from internal and external sources and document ☐

Assess need for program enhancements

- Establish a written process for considering relevant factors ☐

Perform program evaluation

- Pre-test the effectiveness of materials upon initial design or major redesign ☐
- Assess program implementation annually ☐
  - Internal self-assessment, or
  - Third-party assessment, or
  - Regulatory inspection
- Measure program effectiveness every four years ☐
  - Outreach ☐
  - Message comprehension ☐
  - Achieving results ☐

Collect and retain documentation

- Communication materials provided to each stakeholder audience ☐
- Lists, records or other documentation of stakeholder audiences with whom the operator has communicated ☐
- Implementation dates ☐
- Postage receipts ☐
- Response cards ☐
- Audience contact documentation ☐
- Program evaluations, including current results, follow-up actions, and expected results ☐
- Program enhancement ☐

Bibliography

[1] API Recommended Practice 1109, *Marking Liquid Petroleum Pipeline Facilities*

[2] API Standard 1160, *Managing System Integrity for Hazardous Liquid Pipelines*

[3] AGA GPTC Z380.1 [4], *Guide for Gas Transmission and Distribution Piping Systems*

[4] 49 *CFR* 192 [5], *Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards*

[5] 49 *CFR* 195, *Transportation of Hazardous Liquids by Pipeline*

[6] *Hazards Associated with Striking Underground Gas Lines* [6], www.osha.gov/dts/shib/shib_05_21_03_sugl.pdf.

[4] American Gas Association, 400 N. Capitol St., NW, Suite 450, Washington, DC 20001, www.aga.org.

[5] U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, East Building, 2nd Floor, 1200 New Jersey Ave., SE, Washington, DC 20590, *www.phmsa.dot.gov/.*

[6] U.S. Department of Labor, Occupational Safety and Health Administration, 200 Constitution Avenue, NW, Washington, DC 20210, www.osha.gov.

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